

REMARKS

Claims 22-31 are pending.

Claims 22-31 are rejected as failing to comply with the enablement requirement of 35 U.S.C. § 11, first paragraph, because of a deficiency in the drawings.

Applicant respectfully traverses this rejection. Applicant agrees that the original drawings contained errors in the reference numbers. It is believed that the amended drawings submitted on February 11, 2010 are enabling because the new figures 11 and 13 show clearly how the tooth 58, the blunt end 60 of the tooth 58 and the reservoir 54 are positioned with respect to one another (as described in lines 7 to 10 of page 8 of the specification). It can be seen from the drawings how the tooth blunt end 60 can perforate the reservoir 54 by a pressure applied by a user against the can flexible wall 6.

No new matter is added by the amended drawings. Applicant submits that the rejection should be withdrawn.

Claims 22 and 28 were rejected as being indefinite. Amendments are proposed to correct this.

Claims 22-31 are rejected being unpatentable over Liebermann (U.S. Patent 4,491,250) in view of Sergio et al. (U.S. Patent 6,364,103). The Examiner recognizes that the principal reference Liebermann does not teach that a tooth and that this feature is shown in Sergio et al. Applicant disagrees that the combination of the two references, even if improperly made, teaches the subject matter of the claims.

Applicant reminds the Examiner that the flexible wall object of the present invention is a device which adapts easily on a standard container like a bottle or a can, without modification of the container, to allow the user to mix products directly in the container.

To achieve this goal, applicant's invention is directed to a container for allowing the release of a first substance into a second substance, said container comprising in combination (as set forth in claim 22):

a can for containing the second substance provided with an opening at its top end and a lateral flexible wall;

a support insertable in the can for supporting at least one tank containing the first substance within the can adjacent to the inner surface of the can flexible wall;

a fastener to fix the support on the can top end; and

at least one tooth having a first end fixed to the support and a second blunt end abutting at least one tank, said tooth second end engaging and perforating at least one tank in response to a lateral force exerted on an outside area of the can flexible wall that moves the tooth second end relative to at least one tank to engage and perforate at least one tank, thereby releasing the first substance contained within the tank into the second substance contained within the can.

A discussion of the prior art follows.

LIEBERMANN (US 4,491,250)

Liebermann is to provide a product dispensing system that provides constant propellant through the successive generation of the propellant in order to maintain inner pressure. Successive gas generating components are located in pockets found along the cavity of the product dispenser and are operatively connected to generate successive controlled quantities of gas. The purpose of the invention, as discussed in the Background section (column 1), is to provide improvements to flexible and expandable packaged inserts with self contained gas generating components for sequential pressure generating dispensing containers.

Even though Liebermann discloses a piston-action pouch comprising an elongated tubular member sealed at a first end and folded/molded inwardly into itself so that the second end,

also sealed, lies within the outer portion of the tubular member at an inwardly spaced position from the first end (Column 1, line 42). This configuration provides a fluid tight interstitial volume having an annular space between adjacent outer and inner walls of the tubular member. (Column 1, line 50). A pressure generating means is disposed within the interstitial volume and is adapted to generate successive amounts of propellant gas in the interstitial volume. This urges the folded portion of the tubular member axially outwardly from the outer portion to reduce the volume of a product receptacle in order to expel the product from the container. Along the annular interstitial space are pockets that are disposed axially; each pocket contains a product that is sequentially released as the folded portion is urged outwardly from the outer portion.

As stated in column 2 lines 8-11, the action of the piston pouch of Liebermann is to provide "uniform and positive reliable action in opening the pockets which ensures against premature opening of a pocket, or out of sequence of the pockets". Also, in column 4, line 5, it is discussed that such an arrangement of the pockets makes it such that they cannot be opened out of sequence or prematurely, so that maximum efficiency and reliability is guaranteed.

As disclosed by claim 1 of Liebermann, the product found in the pockets is released via the inward movement of the pouch that supports the pockets; first and second strips are disposed within the inner chamber created by the pouch, the second strips being removable from the first strips and having a plurality of pocket members attached thereto. The inner flexibility provided by the strips allows for the second strips to be removable from the first strips, thereby successively releasing the product.

Pertaining for Figure 1, column 2 lines 45 and onward of the specification state that the container in question is of any conventional construction such as that of a standard aerosol-type container having a metallic cylindrical body, enclosed bottom, and a closure member carrying manually actuatable spray valve.

As further discussed in column 2 line 53, disposed within the container of Figure 1 is a piston pouch comprised of elongated tubular outer wall portion sealed closed at its lower or first end

and inwardly folded inner tubular wall portion disposed to lie within the outer wall and having a second sealed second end (see Figure 4). As well, this container involves the contraction of inner and outer walls of the pouch according to the variation of the internal pressure of the container (claim 1).

Applicant's understanding is that Liebermann discusses the use of a pouch that provides successive pockets found on flexible inner walls created by an interstitial space that sequentially release their product via a variation in internal pressure in order to maintain constant propellant power for a product dispenser. The pockets are disposed axially along an annular interstitial space and are sequentially opened through differential pressure changes thereby releasing the contents of these pockets into the inner area of container to generate propellant.

SERGIO ET AL. (US 6,364,103)

The invention disclosed in Sergio et al. serves to facilitate the transport and storage of a fluid held in a cartridge and if desired, also relates to mixing a first and a second fluid found in said cartridge. More specifically, as discussed in column 2 line 3, the device disclosed in Sergio et al. fits the specific need of enabling the safe shipment of the various components of a mixture in a manner that does not require additional safeguards or special shipping procedures. This mode of containment also maintains the shelf life of the various components of a mixture and simplifies their mixing in order to obtain the mixture.

As per claim 1, the Sergio et al. invention is directed towards a cartridge for holding a first and a second fluid comprising a deformable outer capsule containing a first fluid and an inner capsule, enclosed within the outer capsule, containing a second fluid. The inner surface of the outer capsule has at least one spike oriented towards the inner capsule so that when the outer capsule is deformed, the inner capsule is pierced by the spike allowing the first and second liquids to mix.

The invention disclosed in Sergio et al. therefore relies on the deformation of an outer capsule to bring into contact the inner capsule with the spike found in the inner wall of the outer capsule.

More succinctly, as found in column 16, line 10: "A user manually depresses the first end of the outer capsule to bring the at least one spike unto contact with the inner capsule. This permits the second fluid to mix with the first fluid. The step of deforming the cartridge into the second position to allow the first and second fluids can be performed prior to the insertion of the cartridge into the base unit without departing from the scope of the present invention".

Therefore, it is the understanding of the Applicant that Sergio et al. discloses a cartridge comprising an outer capsule and an inner capsule contained within the outer capsule for holding two separate dangerous liquids to be mixed. The outer capsule is flexible and comprises at least one spike found on its inner wall. Therefore, when the outer capsule is deformed, it brings the spike into contact with the inner capsule, thus mixing the contents of both capsules. For the reasons discussed above, this again is dissimilar to the can and to the support as disclosed in the present application.

DIFFERENCE BETWEEN THE PRESENT INVENTION AND LIEBERMANN

The Examiner takes a position that Liebermann discloses the elements of the Applicant's container, a container for allowing the release of a first substance into a second substance, with the exception of a tooth to penetrate the tank for easy mixing of two substances, a feature that is allegedly taught by Sergio et al.

The Examiner should consider that the present invention was conceived to provide a container and a support that explicitly allows for out of sequence opening of tanks, thus achieving a goal opposite to that of Liebermann, as Liebermann openly states (column 4, line 5) that the arrangements of the pockets within the container makes it such that they cannot be opened out of sequence or prematurely.

Claim 1 of Liebermann refers to the use of first and second strips that are disposed within the inner chamber created by the pouch, where the inner flexibility provided by the strips allows for the second strips to be removable from the first strips, thereby releasing the product found in the pockets disposed along the second strips. This mode of action is not at all like the

flexible wall of the can and the insertable support as disclosed and claimed in the present application.

Additionally, The Examiner refers to Figures 1 and 9 of Liebermann as anticipating the container disclosed in the present application.

As discussed in column 2 line 45 of Liebermann and contrary to the Examiner's opinion, Figure 1 discloses a container that is not akin to what is being claimed in claim 22 of the present invention: that is, a container comprising a can for containing the second substance provided with an opening at its top end and a lateral flexible wall.

To this point, and as shown in Figure 1, Liebermann describes a piston pouch that is disposed within a container. This pouch consists of elongated tubular outer wall portions sealed closed at their lower or first end and inwardly folded tubular wall portions disposed to lie within the outer wall and having a second sealed end. This again is to be distinguished from the present invention which as set forth in claim 22 is not a piston pouch but "a support insertable in the can for supporting at least one tank containing the first substance within the can adjacent to the inner surface of the can flexible wall" and "a fastener to fix the support on the can top end". The invention disclosed in Liebermann makes no mention nor does it insinuate such a relationship of dependence between a support and the inner surface of the flexible wall of a can.

In fact, the placement of the piston pouch of Liebermann is such that it relies on the creation of an interstitial cavity (column 3, line 17) and a differential of pressure for its mode of action, independent of the outer walls of the dispenser.

Further pertaining to the container of Figure 1 of Liebermann, the container disclosed does not involve as set forth in claim 2, a can with a flexible lateral wall, a support that is insertable in the can for supporting at least one tank containing a first substance within the can, adjacent to the inner surface of the can flexible wall, nor does it serve the same functionality as the container of the subject invention.

With respect to Figure 9 of Liebermann, the examiner takes the position that “a fastener to fix the support on the can top end” has previously been disclosed. However, the Applicant’s interpretation of Figure 9 is to the effect that it does not explicitly enable a person versed in the art to understand “a support that is fastened to the can top end”. Figure 9, as discussed in column 4 line 18, shows annular cavities that may be formed integrally in the outer wall of the container, at axially spaced positions with the inner wall constituting a lid or a cover. Figure 9 also shows that the inner wall is fixed to the top end of the container; however, it does not disclose a fastener to fix a support on the top end of a can.

These features are dissimilar to the container disclosed and claimed in the present application and nowhere in Liebermann is the present container alluded to.

The examiner is also referred to claim 4 of Liebermann which puts forward a variant where the outer portion of the apparatus is relatively inflexible and the folded portion is relatively flexible. This preferred embodiment is the exact opposite of the container disclosed in the present application as the present invention relies on the flexibility of the lateral wall of the container so as to allow proper selection and dispersion of the tank found on the insertable support.

Therefore, it is submitted that a person versed in the art would not practice Liebermann in view of the present invention since Liebermann involves the sequential, successive opening of the pocket members for the explicit purpose of generating pressure, without any intervention from the user. Liebermann does not disclose a container allowing for user selected release of the products contained in inserted tanks, nor does it disclose a can or container having flexible lateral walls.

DIFFERENCE BETWEEN THE PRESENT INVENTION AND SERGIO ET AL.

As discussed above, claim 1 of Sergio et al. pertains to a cartridge for holding a first and a second fluid comprising a deformable outer capsule containing a first fluid and an inner capsule, enclosed within the outer capsule, containing a second fluid. The inner surface of the outer capsule has at least one spike oriented towards the inner capsule so that when the outer capsule is deformed, the inner capsule is pierced by the spike allowing the first and second liquids to mix.

This is to be distinguished from the tooth and tank support as disclosed in the present invention, which involves the use of lateral force on the container wall to release a substance found in a tank, mounted onto a support, directly into a can having an opening in its top end and not in a removable cartridge:

“At least one tooth having a first end fixed to the support and a second blunt end abutting at least one tank, said tooth second end engaging and perforating at least one tank in response to a lateral force exerted on an outside area of the can flexible wall that moves the tooth second end relative to at least one tank to engage and perforate at least one tank, thereby releasing the first substance contained within the tank into the second substance contained within the can.” (amended claim 22 of the present application)

In addition, Sergio et al. does not insinuate the mounting of the spikes used to perforate the inner capsules onto an alternative insertable support, akin to the lateral tooth and tank mechanism of the present application.

A reading of column 16, line 10, of Sergio et al. further supports the fact that the inventors did not provide for the spike to be mountable onto an insertable support and into the cartridge where the outer wall of the cartridge can be manually depressed laterally against the spike bringing the spike into contact with the inner capsule. The invention disclosed in Sergio et al. provides for the opposite, where the spike is affixed to the inner wall of the outer capsule and exterior pressure, in conjunction with the flexibility of the outer capsule, brings the inner capsule into contact with the spike. The use of a lateral flexible wall or a support other than a base is not mentioned.

As such, the present invention provides for the lateral flexibility of the wall of a can in order to provide lateral pressure against the blunt end of a tooth found on an inserted support in order to bring the tooth into contact with the tank, thus piercing it and mixing the contents. It is submitted that a person versed in the art would not practice Sergio et al. to enable the present invention.

It can be seen in Claims 1, 7, 9 of Sergio et al. , the cartridge itself involves both an outer capsule and an inner capsule while the present invention involves a tank that when perforated empties its contents out into a can.

The examiner also must consider that the present invention pertains to “at least one tooth having a first end fixed to the support and a second blunt end abutting at least one tank, said tooth second end engaging and perforating at least one tank in response to a lateral force exerted on an outside area of the can flexible wall that moves the tooth second end relative to at least one tank to engage and perforate at least one tank, thereby releasing the first substance contained within the tank into the second substance contained within the can.” Therefore, the interaction between the blunt end of the tooth and the tank of the present invention is not to be likened to the interaction between the cartridge, the inner capsule, the outer capsule and the spike of Sergio et al.

As well, in terms of successive mixtures of the liquids found in the cavities of the cartridge, column 5 line 20 of Sergio et al. teaches of several inner cavities that are contained one within the other and that, when pierced, would mix together all at once, thus not enabling the user to manually select a particular mixture of more than two liquids.

Furthermore, column 6 line 41 of Sergio et al. does provide for a user selected mixture of multiple liquids contained in inner capsules; however, this selection involves inserting a perforating tube into self sealing “perforable” sections of the outer capsule in order to select the requested mixture. This perforating tube is to be introduced into the cartridge in order to extract the mixture and is not part of the cartridge itself (column 6 line 59); the present invention involves the perforation of a tank wall with a tooth in order to provide for a user selected mixture that does not involve an extraction step via a perforating tube.

It is repeated that Sergio et al. does not teach an insertable support inserted into a can where the support comprises a tooth for penetrating a tank, also found on the support, for easy mixing of two substances. It teaches an isolated cartridge having an inner and an outer capsule, where the outer capsule’s flexibility allows for a spike mounted on its inner surface to come into

contact with the inner capsule, thus mixing their contents, to be further extracted. This is not akin to the can and support mechanism of the present application.

A person versed in the art, in light of this, would not look to practice Sergio et al. to enable the present invention.

Finally, the insertable aspect of the present invention is important to be considered from an industrial production perspective. As the objective of the present invention has clearly been identified as to provide “a device which adapts easily on a standard container like a bottle or a can, without modification of the container, to allow the user to mix products directly in the container”, the pertinence of Sergio et al. becomes less and less evident from a practicality perspective. The versatility and compatibility of the present invention allows for it to be readily included in various production lines in order to be inserted into standard manufactured cans. Whereas the invention disclosed in Sergio et al. clearly would not enable someone to achieve that purpose.

CONCLUSION

In conclusion, the present invention involves several structural and functional elements that are not present or taught by Liebermann, Sergio et al. or a combination of both; those elements being:

- a can provided with a lateral flexible wall;
- a support insertable in the can for supporting at least one tank adjacent to the inner surface of the can flexible wall;
- at least one tooth having a first end fixed to the support and a second end engaging and perforating at least one tank in response to a lateral force exerted on an outside area of the can flexible wall that moves the tooth second end relative to at least one tank to engage and perforate at least one tank.

There is no basis to combine the teachings of Liebermann and Sergio et al. . Even if the combination is made, it does not meet the terms of main claim 22.

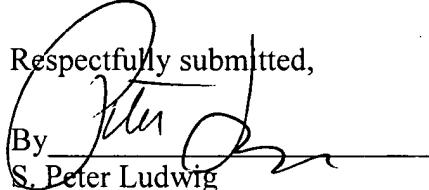
The Examiner is therefore kindly requested to withdraw his rejection for obviousness in light of what has presently been submitted.

The amendment should be entered since it clearly places the application in condition for allowance. It raises no new issues.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

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